



1/29

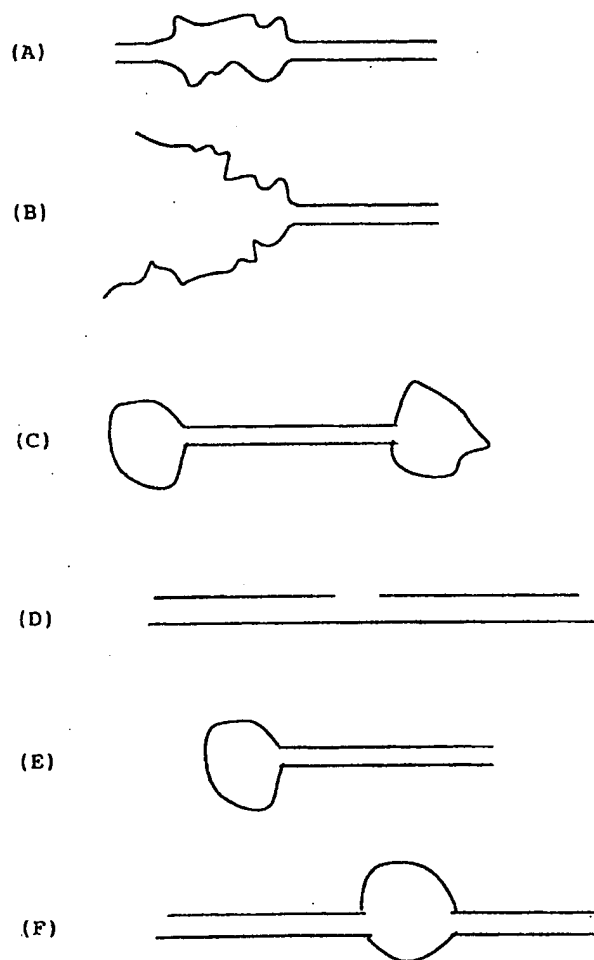


Figure 1 (A-F)

Construct Forms Comprising at Least one Single-Stranded
Region

2/29

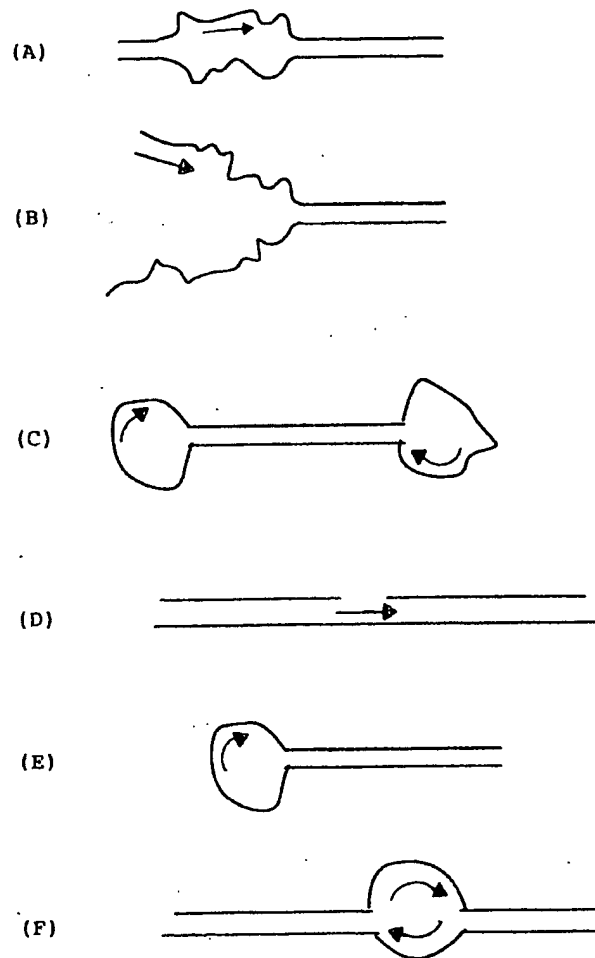


Figure 2 (A-F)

Functional Forms of the Construct

3/29

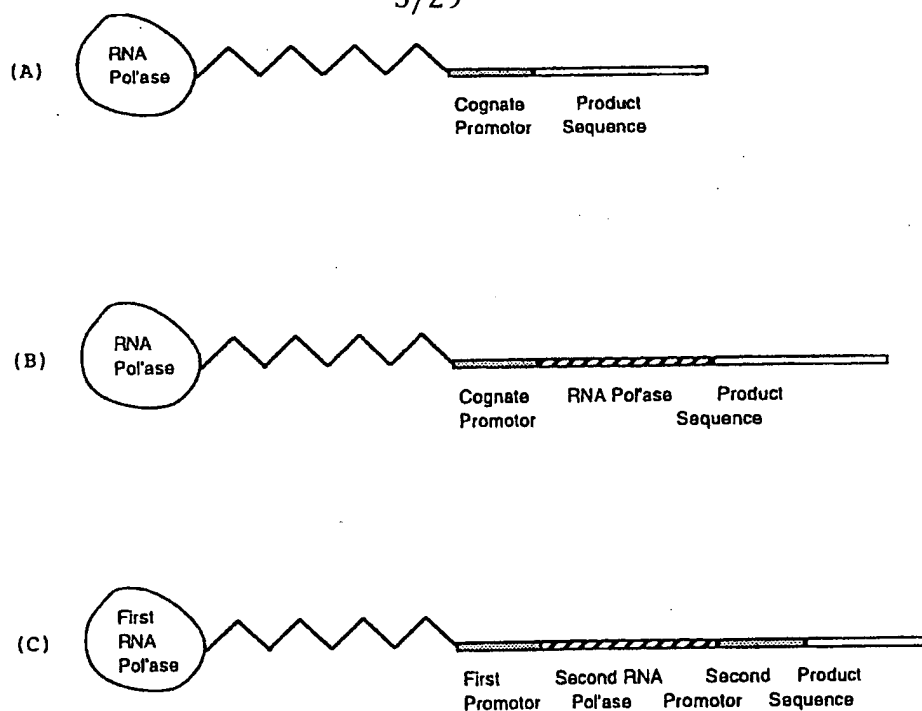


Figure 3 (A-C)

Three Constructs with an RNA Polymerase
Covalently Attached to a Transcribing Cassette

4/29

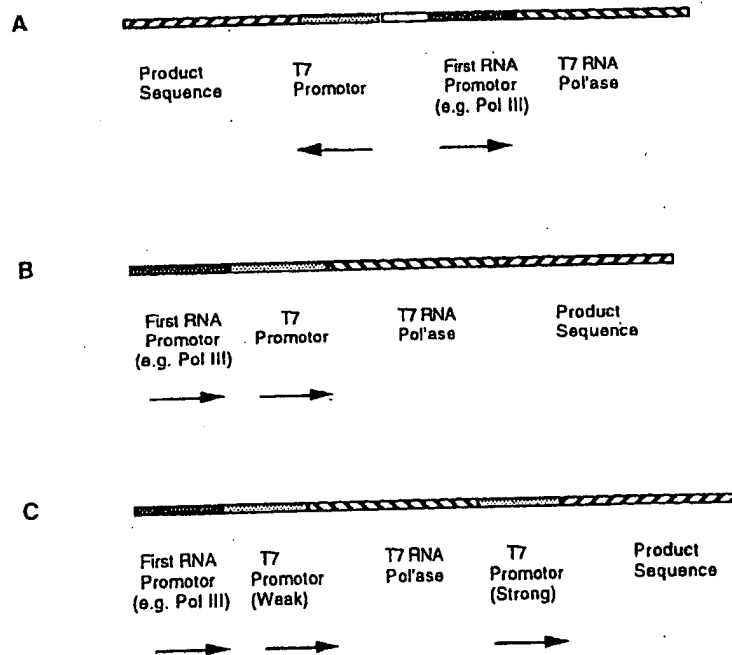


Figure 4 (A-C)

Three Constructs with Promoters
for Endogenous RNA Polymerase

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet
5/29

M13mp18. Seq Length: 7250

1.	AATGCTACTA	CTATTAGTAG	AATTGATGOC	ACCTTTTCAG	CTOGGOGDOC
51.	AAATGAAAAT	ATAGCTAAAC	AGGTTATTGA	CCATTTCOGA	AATGTATCTA
101.	ATGGTCAAAC	TAAATCTACT	CGTTGCGAGA	ATTGGGAATC	AACTGTTACA
151.	TGGAATGAAA	CTTCCAGACA	COGTACTTTA	GTTGCATATT	TAAAACATGT
201.	TGAGCTACAG	CACCAGATTC	AGCAATTAAG	CTCTAAGOCA	TCOGCAAAAA
251.	TGACCTCTTA	TCAAAAGGAG	CAATTAAAGG	TACTCTCTAA	TCCTGAOCTG
301.	TTGGAGTTTG	CTCOGGTCT	GGTTGCTTT	GAAGCTOGAA	TTAAAACGGG
351.	ATATTTGAAG	TCTTTGGGC	TTCCTCTTAA	TCTTTTGTAT	GCAATCOGCT
401.	TTGCTTCTGA	CTATAATAGT	CAGGTAAG	AOCTGATTTT	TGATTTATGG
451.	TCATTCTOGT	TTTCTGAAGT	GTTTAAAGCA	TTTGAGGGGG	ATTCAATGAA
501.	TATTTATGAC	GATTOGCGAG	TATTGGAGCG	TATCCAGTCT	AAACATTTTA
551.	CTATTACDOC	CTCTGGCAAA	ACTTCTTTTG	CAAAAGCCTC	TCGCTATTTT
601.	GGTTTTTATC	GTCGTCTGGT	AAAGAGGGT	TATGATAGTG	TTGCTCTTAC
651.	TATGOCCTGT	AATTCTTTT	GGCGTTATGT	ATCTGCATTA	GTTGAATGTG
701.	GTATTOCTAA	ATCTCAACTG	ATGAATCTTT	CTACCTGTAA	TAATGTTGTT
751.	COGTTAGTTC	GTTTTATTAA	CGTAGATTTT	TCTTCCAAAC	GTCCTGACTG
801.	GTATAATGAG	CCAGTTCTTA	AAATGCGATA	AGGTAATTCA	CAATGATTAA
851.	AGTTGAAATT	AAACCATCTC	AAGCCCAATT	TACTACTOGT	TCTGGTGTTC
901.	TCGTCAGGGC	AAGCTTATT	CACTGAATGA	GCAGCTTTGT	TACGTTGATT
951.	TGGGTAATGA	ATATCOGGTT	CTTGTCGAAG	ATTACTCTTG	ATGAAGGTCA
1001	GOCAGOCCTAT	GOGCCTGGTC	TGTACACCGT	TCATCTGTCC	TCTTTCAAAG
1051	TTGGTCAGTT	CGGTTCCCTT	ATGATTGAAC	GTCTGCGOCT	CGTTCCGGCT
1101	AAGTAACATG	GAGCAGGTGG	CGGATTTTGA	CACAATTTAT	CAGGCGATGA
1151	TACAAATCTC	CGTTGTAOCTT	TGTTTGGGCG	TTGGTATAAT	CGCTGGGGGT
1201	CAAAGATGAG	TGTTTTAGTG	TATTCTTTGG	OCTCTTTGCT	TTTAGGTTGG

Figure 5

M13mp18 Nucleic Acid Sequence

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet

6/29

1251	TGCTTGTGTA	GTGGCATTAC	GTATTTTACC	CGTTTAATGG	AACTTCTCTC
1301	ATGAAAAAGT	CTTTAGTCT	CAAAGCTCT	GTAGGCGTTG	CTAAGCTGCT
1351	TCCGATGCTG	TCTTTGCTG	CTGAGGGTGA	CGATCCCGCA	AAAGGGGCT
1401	TTAACTCCT	GCAAGCTCA	GCGACCGAAT	ATATCGGTTA	TGCTGGGGG
1451	ATGGTTGTG	TCATTGTGG	CGCAACTATC	GGTATCAAGC	TGTTTAAGAA
1501	ATTACCTCG	AAAGCAAGCT	GATAAACCGA	TACAATTAAA	GGCTCTTTT
1551	GGAGCTTTT	TTTTTGAGA	TTTCAACGT	GAAAAATTA	TTATTCGCA
1601	TTCTTTAGT	TGTTCTTTC	TATTCTCACT	CGCTGAAAC	TGTTGAAAGT
1651	TGTTTAGCAA	AACCCATAC	AGAAAATTCA	TTTACTAACG	TCTGGAAGA
1701	CGACAAACT	TTAGATCGTT	ACGCTAACTA	TGAGGGTTGT	CTGTGGAATG
1751	CTACAGGGT	TGTAGTTTGT	ACTGGTGAAG	AAACTCAGTG	TTAAGGTACA
1801	TGGGTTCTA	TTGGGCTTGC	TATCCCTGAA	AATGAGGGTG	GTGGCTCTGA
1851	GGGTGGGGT	TCTGAGGGTG	GCGTTCTGA	GGGTGGGGT	ACTAAAGCTC
1901	CTGAGTAAGG	TGATACAAGT	ATCCGGGCT	ATACTTATAT	CAAGCTCTCT
1951	GAGGCACTT	ATCCGCTGG	TACTGAGCAA	AACCGCTA	ATCTAATCC
2001	TTCTCTGAG	GAGTCTCAGC	CTCTTAATAC	TTTCATGTTT	CAGAATAATA
2051	GGTTCCGAAA	TAGGCAGGGG	GCATTAACGT	TTTATACGGC	CACTGTTACT
2101	CAAGGCACTG	AACCGGTTAA	AACTTATTAC	CAGTACACTC	CTGTATCATC
2151	AAAAGCCATG	TATGAGGCTT	ACTGGAAGCG	TAAATTCAGA	GAAGGCGCTT
2201	CAAGGCACTG	AACCGGTTAA	AACTTATTAC	CAGTACACTC	CTGTATCATC
2151	AAAAGCCATG	TGCTCAAGC	TCCTGTCAAT	GCTGGGGGG	GCTCTGGTGG
2201	TCCATCTGG	CTTTAATCAA	GATCCATTCG	TTTGTGAATA	TCAAGGCCAA
2251	TGCTCTGAGC	TGCTCAAGC	TCCTGTCAAT	GCTGGGGGG	GCTCTGGTGG
2301	TGGTTCTGGT	GGGGCTCTG	AGGGTGGTGG	CTCTGAGGGT	GGGGTTCTG
2351	AGGGTGGGG	CTCTGAGGGA	GGGGTTCCG	GCTGGGCTC	TGGTTCCGGT
2401	GATTTTGATT	ATGAAAAGAT	GGCAAGGCT	AATAAGGGGG	CTATGACCGA
2451	AAATGCGAT	GAAAAGGGC	TACAGTCTGA	CGCTAAAGGC	AACTTGATT

Figure 5

M13mp18 Nucleic Acid Sequence

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet

7/29

2501	CTGTGCTAC	TGATTAOGGT	GCTGCTATCG	ATGGTTTCAT	TGCTGAOGTT
2551	TOGGGOCITG	CTAATGGTAA	TGGTGCTACT	GGTGATTTTG	CTGGCTCTAA
2601	TTCCCAAATG	GCTCAAGTOG	GTGAOGGTGA	TAATTCACCT	TTAATGAATA
2651	ATTTOCGTCA	ATATTTACCT	TOOCTOOCCTC	AATOGGTTGA	ATGTGGOOCT
2701	TTTGTCTTTA	GCGCTGGTAA	ACCATATGAA	TTTTCTATTG	ATTGTGACAA
2751	AATAAACTTA	TTCCGTGGTG	TCTTTGCGTT	TCTTTTATAT	GTTGOCACCT
2801	TTATGTATGT	ATTTTCTACG	TTTGCTAACA	TACTGCGTAA	TAAGGAGTCT
2851	TTATCATGOC	AGTTCCTTTG	GGTATTOCGT	TATTATTGCG	TTTOCTCGGT
2901	TTCTTCTGG	TAACCTTGTT	CGGCTATCTG	CTTACTTTTC	TTAAAAAGGG
2951	CTTOGGTAAG	ATAGCTATTG	CTATTTCAAT	GTTTCTTGCT	CTTATTATTG
3001	GGCTTAACTC	AATTCCTGTG	GGTTATCTCT	CTGATATTAG	CGCTCAATTA
3051	COCTCTGACT	TTGTTCAGGG	TGTTCACTTA	ATTCTCOOGT	CTAATGCGCT
3101	TCOCTGTTTT	TATGTTATTC	TCTCTGTAAA	GGCTGCTATT	TTCATTTTTG
3151	ACGTTAAACA	AAAAATCGTT	TCTTATTTGG	ATTGGGATAA	ATAATATGGC
3201	TGTTTATTTT	GTAAGTGGCA	AATTAGGCTC	TGGAAAGAOG	CTOGTTAGOG
3251	TTGGTAAGAT	TCAGGATAAA	ATTGTAGCTG	GGTGCAAAAT	AGCAACTAAT
3301	CTTGATTAA	GGCTTCAAAA	OCTCOOGCAA	GTCGGGAGGT	TCGCTAAAC
3351	GCOCTOGGTT	CTTAGAATAC	CGGATAAGOC	TTCTATATCT	GATTTGCTTG
3401	CTATTGGGOG	CGGTAATGAT	TOCTACGAATG	AAAATAAAAA	CGGCTTGCTT
3451	GTTCTOGATG	AGTGCGGTAC	TTGGTTTAAT	ACCOGTTCTT	GGAATGATAA
3501	GGAAGACAG	CCGATTATTG	ATTGGTTTCT	ACTGCTCGT	AAATTAGGAT
3551	GGGATATTAT	TTTTCTTGTT	CAGGACTTAT	CTATTGTTGA	TAAACAGGOG
3601	CGTTCTGCAT	TAGCTGAACA	TGTTGTTTAT	TGTOGTGCTC	TGGACAGAAT
3651	TACTTTACCT	TTTGTOGGTA	CTTTATATTC	TCTTATTACT	GGCTOGAAAA
3701	TGCTCTGOC	TAAATTACAT	GTTGGOGTTG	TTAAATATGG	CGATTCTCAA
3751	TTAAGCOCTA	CTGTTGAGOG	TTGGCTTTAT	ACTGGAAGA	ATTTGTATAA
3801	CGCATATGAT	ACTAAACAGG	CTTTTCTAG	TAATTATGAT	TOCGGTGTTT

Figure 5

M13mp18 Nucleic Acid Sequence

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet

8/29

```
3851 ATTCTTATTT AACGCCTTAT TTATCACAAG GTGCGTATTT CAAAOCATTA
3901 AATTTAGGTC AGAAGATGAA ATTAACATAA ATAATATTGA AAAAGTTTTC
3951 TOGOGTTCTT TGTCTTGGGA TTGGAJTTGC ATCAGCATTY ACATATAGTT
4001 ATATAOCCA AOCTAAGGCG GAGGTTAAAA AGGTAGTCTC TCAGAOCTAT
4051 GATTTTGATA AATTCACATAT TGA CTCTCTCT CAGOGTCTTA ATCTAAGCTA
4101 TCGCTATGTT TTCAAGGATT CTAAGGGAAA ATTAATTAAT AGOGACGATT
4151 TACAGAAGCA AGGTTATTCA CTCACATATA TTGATTTATG TACTGTTTCC
4201 ATTAATAAAG GTAATTCAAA TGAAATTGTT AAATGTAATT AATTTTGTTT
4251 TCTTGATGTT TGTTTCATCA TCTTCTTTG CTCAGGTAAT TGAAATGAAT
4301 AATTGOGCTC TGOGOGATT TTGTAACCTGG TATTCAAAGC AATCAGGCGA
4351 AATOCGTTATT GTTCTCDOOG ATGTAAAAGG TACTGTTACT GTATATTCAT
4401 CTGAOGTTAA AOCTGAAAAT CTACGCAATT TCTTTATTTC TGTTTTACGT
4451 GCTAATAATT TTGATAATGGT TGGTTCAATT OCTTCCATAA TTCAGAAGTA
4501 TAATOCAAAC AATCAGGATT ATATTGATGA ATTGOCATCA TCTGATAATC
4551 AGGAATATGA TGATAATTOC GCTOCTCTG GTGGTTTCTT TGTTCOGCAA
4601 AATGATAATG TTA CTCAAAC TTTTAAAATT AATAAGGTC GGGCAAAGGA
4651 TTTAATAOGA GTTGTOGAAT TGT TTGTAAA GTCTAATACT TCTAAATCCT
4701 CAAATGTATT ATCTATTGAC GGCTCTAATC TATTAGTTGT TAGTGCTOCT
4751 AAAGATATTT TAGATAAOCT TOCTCAATC CTTTCTACTG TTGATTTGOC
4801 AACTGAOCAG ATATTGATTG AGGGTTTGAT ATTTGAGGTT CAGCAAGGTC
4851 ATGCTTTAGA TTTTTCATTT GCTGCTGGCT CTCAGOGTGG CACTGTTGCA
4901 GGOGGTGITA ATACTGAOOG OCTCAOCTCT GTTTTATCTT CTGCTGGTGG
4951 TTGTTTCGGT ATTTTAAATG GOGATGTTTT AGGGCTATCA GTTGGOGCAT
5001 TAAAGACTAA TAGOCATTCA AAAATATTGT CTGTGOCACG TATTCTTAOG
5051 CTTTCAGGTC AGAAGGGTTC TATCTCTGTT GGOCAGAATG TCCCTTTTAT
5101 TAAAGACTAA TAGOCATTCA AAAATATTGT CTGTGOCACG TATTCTTAOG
5151 OGATTGAGCG TCAAAATGTA GGTATTTCCA TGAGOGTTTT TOCTGTTGCA
```

-Figure 5

M13mp18 Nucleic Acid Sequence

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet

9/29

```

5201 ATGGCTGGGG . GTAATATTGT. TCTGGATATT ACCAGCAAGG OCGATAGTTT
5251 GAGTTCTCT ACTCAGGCAA GTGATGTTAT TACTAATCAA AGAAGTATTG
5301 CTACAAOGGT TAATTTGGGT GATGGACAGA CTCTTTTACT OGGTGGGCTC
5351 ACTGATTATA AAAACACTTC TCAAGATTCT GGGGTACGGT TOCTGTCTAA
5401 AATOCCTTTA ATCGGGCTOC TGTTTAGCTC OCGCTCTGAT TOCAAAGAGG
5451 AAAGCAOGTT ATAOGTGCTC GTCAAAGCAA CCATAGTAOG OGGCTGTAG
5501 OGGGOCATTA AGGGGGGGGG GTGTGGTGGT TAOGGGCAGC GTGAOOGCTA
5551 CACTTGOCAG OGGGCTAGGG OGGGCTOCTT TCGCTTTCTT COCTTOCTTT
5601 CTGGCAOGT TGGGGGGCTT TGGGGGTCAA GCTCTAAATC GGGGGGCTGG
5651 TTTAGGGTTC OGATTTAGTG CTTTACGGCA OCTGGAGGCG AAAAACTTG
5701 ATTTGGGTGA TGGTTCAOGT AGTGGGOCAT OGGGCTGATA GACGGTTTTT
5751 OGGGCTTTGA OGTGGAGTC CAGGTTCTTT AATAGTGGAC TCTTGTTCOA
5801 AACTGGAACA ACACTCAAOC CTATCTGGGG CTATCTTTT GATTTATAAG
5851 GGATTTTGGC GATTTGGGAA CCACATCAA ACAGGATTTT OGGCTGCTGG
5901 GGCAAAGCAG OGTGGAGGCG TTGCTGCAAC TCTCTCAGGG CCAGGGGGTG
5951 AAGGGCAATC AGCTGTTGGC OGTCTGGCTG GTGAAAAGAA AAAGCAAGCT
6001 GGGGGGCAAT AAGCAAGGCG OCTCTGGGG OGGGTTGGC GATTCATTAA
6051 TGCAGCTGGC AAGACAGGTT TGGGAGCTGG AAAGGGGCA GTGAGGGCAA
6101 CGCAATTAAT GTGAGTTAGC TCACTCATTA GGCAGGCGAG GCTTTACACT
6151 TTATGCTTGC GGCTGGTATG TTGTGTGGAA TTGTGAGGG ATAACAATTT
6201 CACACAGGAA ACAGCTATGA CCATGATTAC GAATTOGAGC TOGTTAGGCG
6251 GCGATGCTCT AGAGTGGAGC TGCAGGCATG CAAGCTTGGC ACTGGGGGTC
6301 GTTTTACAAC GTGGTGACTG GGGAAAGGCT GGGGTTAGC AACTTAATCG
6351 OCTTGAGCA CAATGGGCTT TGGGAGCTG GGGTAATAGC GAAGAGGGCG
6401 GCAAGGATCG OGGTTGGCAA CAGTTGGGCA GCGTAATGG CGAATGGGCG
6451 TTTGGCTGGT TGGGGGAGC AGAAGGGGTG OGGGAAAGCT GGGTGGAGTG
6501 CGATCTTCT GAGGGGAGTA OGGTGGTGGT OGGTCAAAC TGGCAGATGC

```

Figure 5

M13mp18 Nucleic Acid Sequence

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet

10/29

6551	A0GGTTA0GA	TG0G00CATC	TACACCAACG	TAA0CTAT0C	CATTACGGTC
6601	AAT00G00GT	TTGTTCCAC	GGAGAAT00G	ACGGGTTGTT	ACT0GCTCAC
6651	ATTTAATGTT	GATGAAAGCT	GGCTACAGGA	AGG0CAGA0G	CGAATTATTT
6701	TTGATGG0GT	TOCTATTGGT	TAAAAAATGA	GCTGATTTAA	CAAAAAATTTA
6751	ACG0GAATTT	TAACAAAATA	TTAACGTTTA	CAATTTAAAT	ATTGCTTAT
6801	ACAATCTT0C	TGTTTTTGGG	GCTTTTCTGA	TTATCAAC0G	GGGTACATAT
6851	GATTGACATG	CTAGTTTTAC	GATTAC0GTT	CATCGATTCT	CTTGTTTGCT
6901	0CAGACTCTC	AGGCAATGAC	CTGATAG0CT	TTGTAGATCT	CTCAAAAATA
6951	GCTAC00CTCT	00GGCATGAA	TTTATCAGCT	AGAACGGTTG	AATATCATAT
7001	TGATGGTGAT	TTGACTGTCT	00GG0CTTTC	TCAC0CTTTT	GAATCTTTAC
7051	CTACACATTA	CTCAGGCATT	GCATTTAAAA	TATATGAGGG	TTCTAAAAAT
7101	TTTTATCCTT	GGGTTGAAAT	AAAGGCTTCT	000GCAAAAG	TATTACAGGG
7151	TCATAATGTT	TTTGGTACAA	0CGATTTAGC	TTTATGCTCT	GAGGCTTTAT

Figure 5

M13mp18 Nucleic Acid Sequence

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet

11/29

COMPLEMENTARY TO M ₁₃			
POSITION	5' . . . 3'	POSITION	
645	AGCAACACTATCATA	631	M ₁₃ /1
615	ACGAACGATAAAAAAC	601	M ₁₃ /2
585	TTTTGCAAAGAAGT	571	M ₁₃ /3
555	AATAGTAAATGTTT	541	M ₁₃ /4
525	CAATACTGCGGAATG	511	M ₁₃ /5
495	TGAATCCCCCTCAA	481	M ₁₃ /6
465	AGAAAACGAGAATGA	451	M ₁₃ /7
435	CAGGTCTTTACCOCTG	421	M ₁₃ /8
405	AGGAAACGGGATTGC	391	M ₁₃ /9
375	AGGAAGCCCGAAAGA	361	M ₁₃ /10

COMPLEMENTARY TO SS PHAGE DNA			
POSITION	5' . . . 3'	POSITION	
351	ATATTTGAAGTCTTT	366	M ₁₃ /11
371	TCTTTTGTGCAAT	386	M ₁₃ /12
391	CTATAACTCAGGG	406	M ₁₃ /13
411	TGATTTATGGTCATT	426	M ₁₃ /14
431	GTTTAAAGCATTGA	446	M ₁₃ /15
451	TATTTATGACGATTC	466	M ₁₃ /16
471	TATCCAGTCTAAACA	486	M ₁₃ /17
491	CTCTGGCAAACTTC	506	M ₁₃ /18
511	TCGCTATTTGGTTT	526	M ₁₃ /19
531	AAACGAGGGTTATGA	546	M ₁₃ /20

Figure 6

Primers for Nucleic Acid Production
Derived from M13mp18 Sequence

12/29

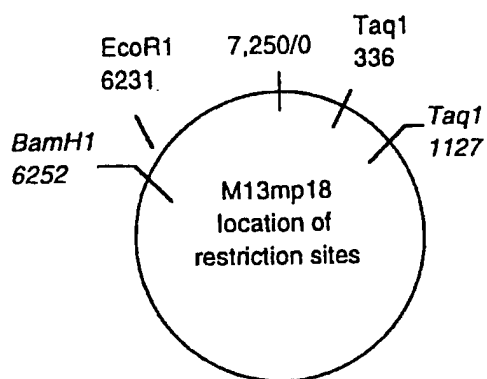
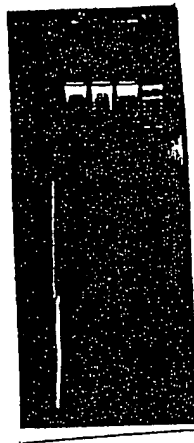


Figure 7

Appropriate M13mp18 Restriction Sites

13/29



Lane 1: from calf thymus + Taq digested mp18 amplification reaction
Lane 2: from Taq digested mp18 amplification reaction
Lane 3: from calf thymus amplification reaction
Lane 4: øX174 Hinf1 size marker

Figure 8

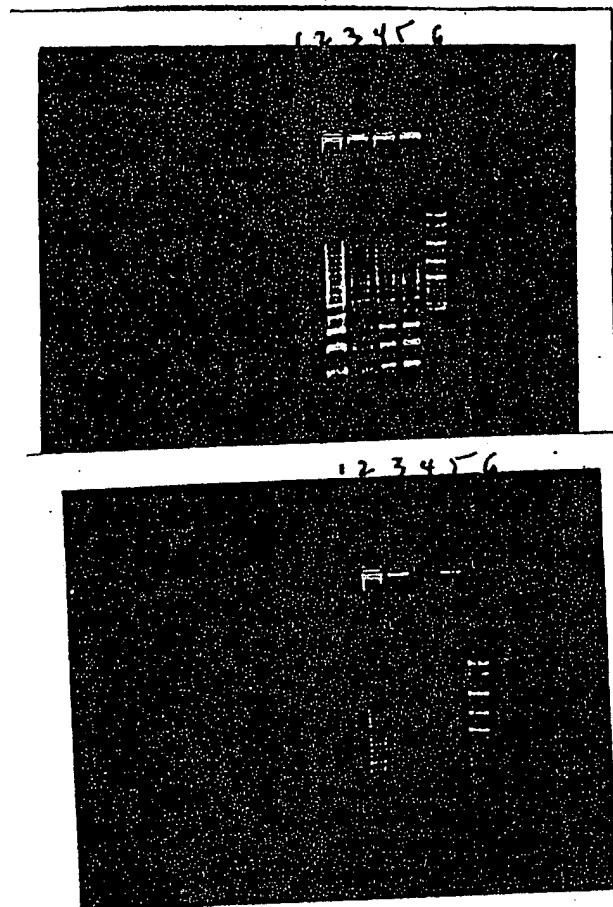
14/29



Lane 1: no template
Lane 2: mp18 template, phosphate buffer
Lane 3: MspI/pBR322 size marker
Lane 4: mp18 template, MOPS buffer

Figure 9

15/29

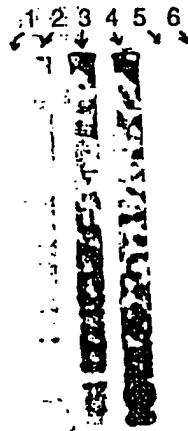


Top= (+) Template
Bottom= (-) Template

Lane 1: phosphate buffer
Lane 2: MES
Lane 3: MOPS
Lane 4: DMAB
Lane 5: DMG
Lane 6: pBR322/MspI size marker

Figure 10

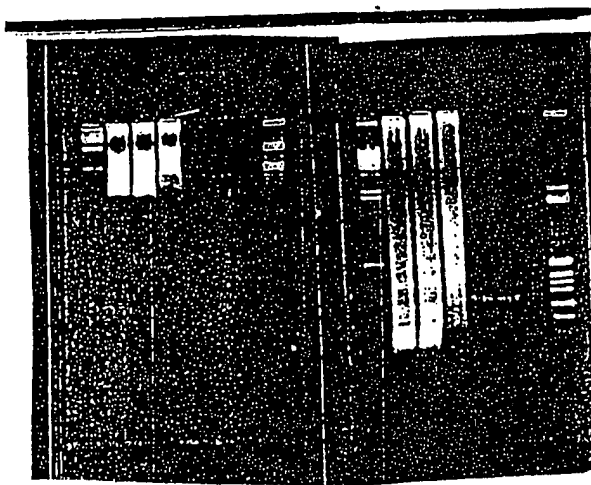
16/29



Lane 1: DMAB buffer, no template
Lane 2: DMAB buffer, mp18 template
Lane 3: DMG buffer, no template
Lane 4: DMG buffer, mp18 template
Lane 5: No reaction
Lane 6: 200 ng Taq I digested mp18
size marker/positive control

Figure 11

17/29



First Time Interval Second Time Interval

Agarose Gel Analysis

Lane 1: lambda Hind III marker
Lane 2: Amp/Untreated
Lane 3: Amp/Kinased
Lane 4: Amp/Kinased/Ligated
Lane 5: PCR/Untreated
Lane 6: PCR/Kinased
Lane 7: PCR/Kinased/Ligated
Lane 8: øX174/Hinf1 marker

Figure 12

18/29

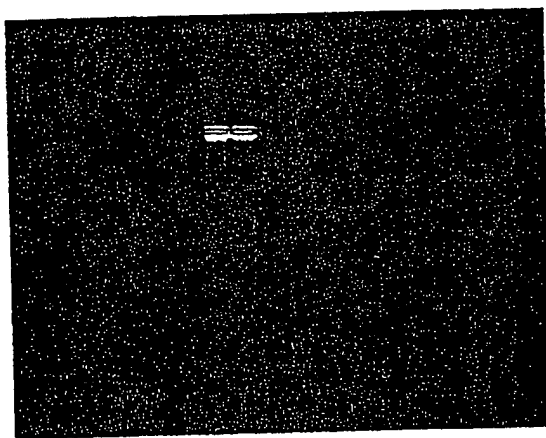
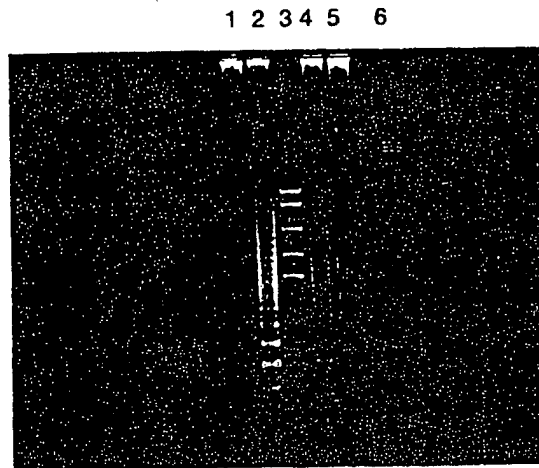


Figure 13

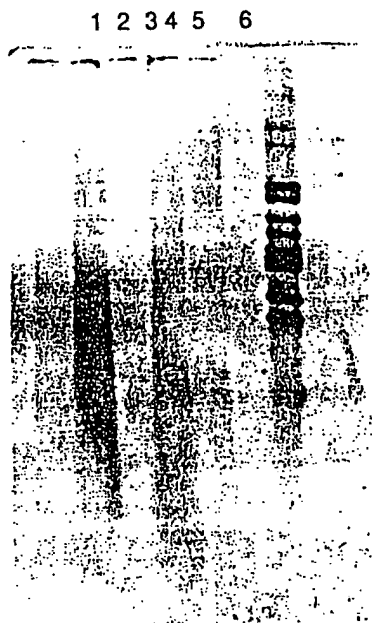
19/29



Lane 1: Primers alone
Lane 2: Primers + taq digested M13 DNA
Lane 3: Molecular weight markers
Lane 4: Primers + RNA
Lane 5: Primers alone
Lane 6: M13 digested DNA
Buffer was dimethyl amino glycine, pH 8.6

Figure 14

20/29



Lane 1: Primers alone
Lane 2: Primers + taq digested M13 DNA
Lane 3: Molecular weight markers
Lane 4: Primers + RNA
Lane 5: Primers alone
Lane 6: M13 digested DNA
Buffer was dimethyl amino glycine, pH 8.6

Figure 15

21/29

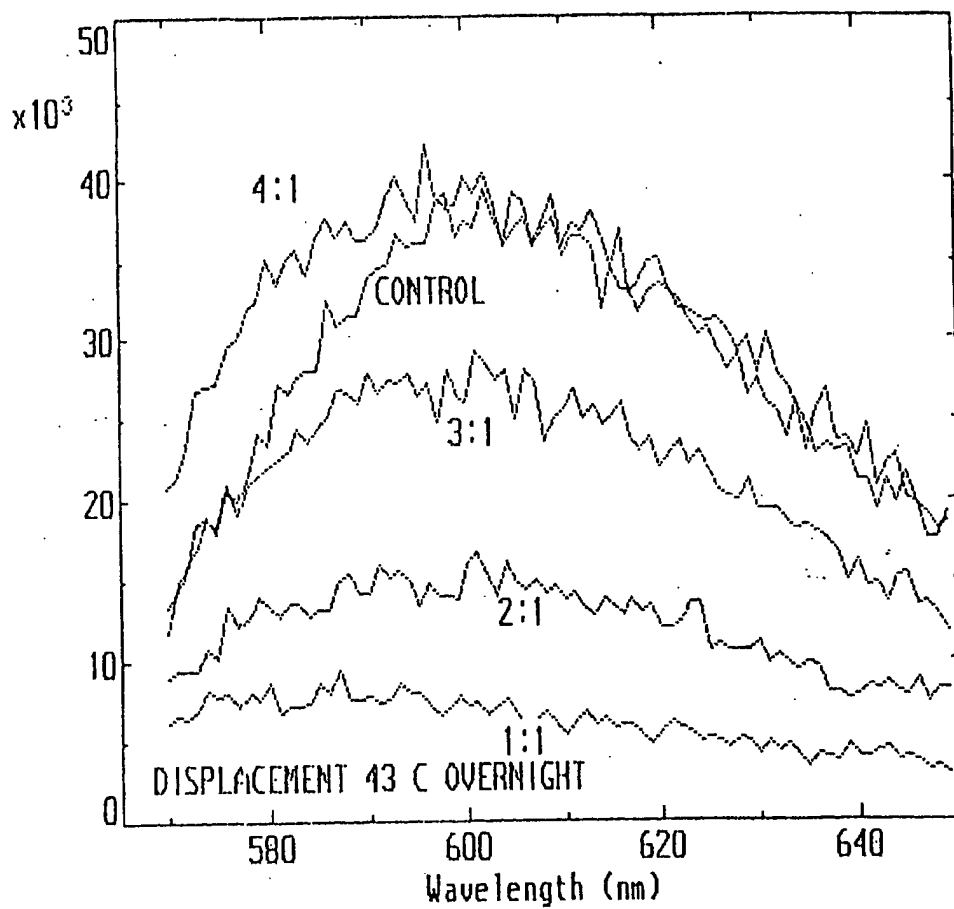


Figure 16

22/29

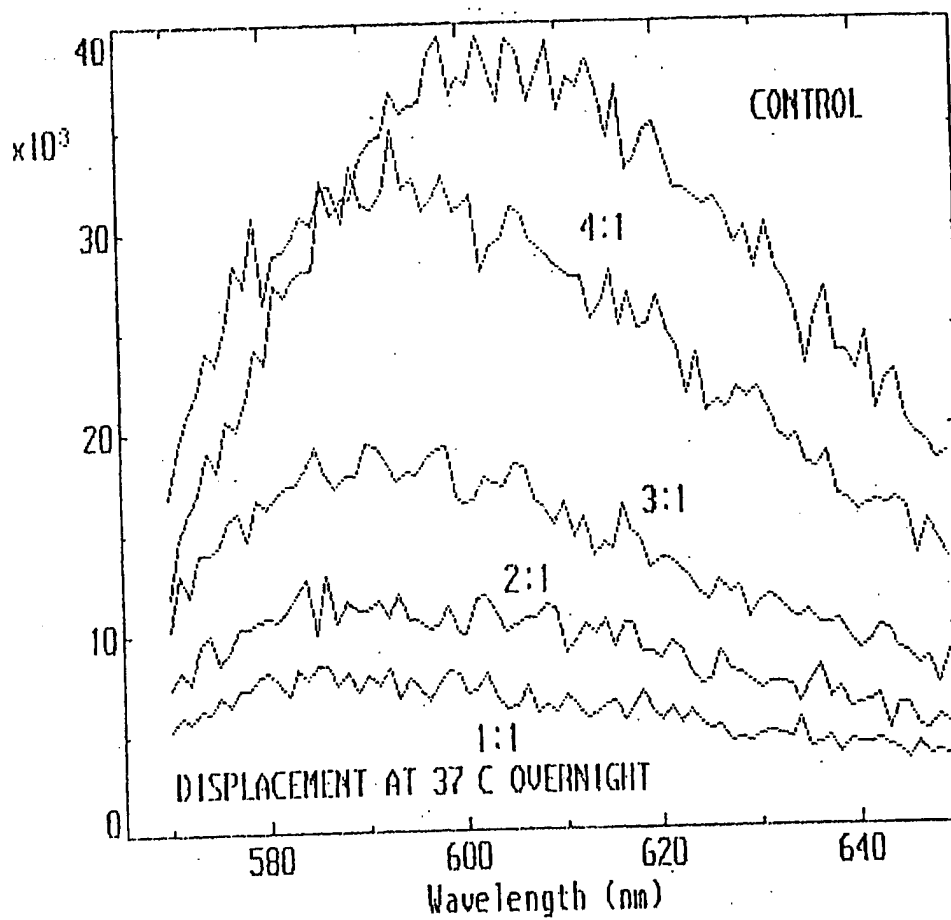


Figure 17

Appln. No. 10/713,183
Amendment filed April 17, 2008
Reply to Office Action of March 28, 2008
Replacement Sheet

23/29

pIBI 31-BH5-2

fmet AUG of Lac z (T7 Promotor region....
LAC PROMOTOR..ATG ACC ATG ATT ACG CCA GAT ATC AAA TTA ATA CGA CTC ACT ATA
oligo 50-mer 3'- lac t'aa t'gc ggl' ct'a t'ag t'Vt aat' tat' gct' gag t'ga t'al' c-5'
10 base insert
T7 RNA Start (T3 Promotor Region)
IGGG CTC ICCT TTA GTG ACG GTT AAT
....»} «- T3 Start Signal

pIBI 31 BSII/HCV

fmet AUG of Lac z (T3 Promotor region --) T3 RNA Start
LAC PROMOTOR ..ATG ACC ATG ATT ACG CCA AGC TCG AAA TTA ACC CTC ACT AAA /GGG
oligo 50-mer 3'- lac t'aa t'ac t'aa t'gc ggl' t'V--10 base insert--.....
(M- T7 Promotor Region)
MULTIPLE CLONING SITE + 390 BASE INSERT CTA /TAG TGA GTC CGT ATT AAT....
«- T7 Start Signal
5'-ct'a t'ag t'ga gt'c gt'a tt'a at'.....

Figure 18

24/29

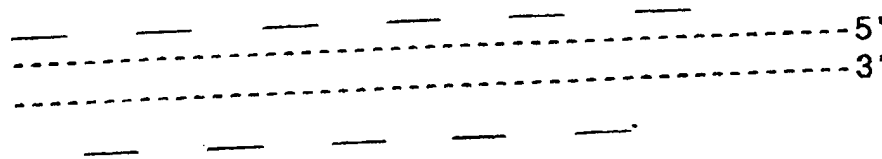
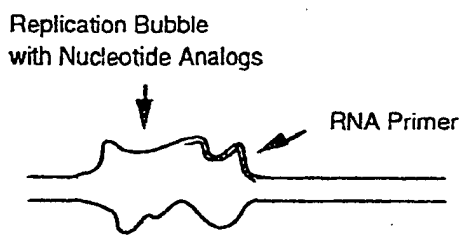


Figure 19

25/29



**Primer-Dependent DNA Production
Using Nucleic Acid Construct**

Figure 20

26/29

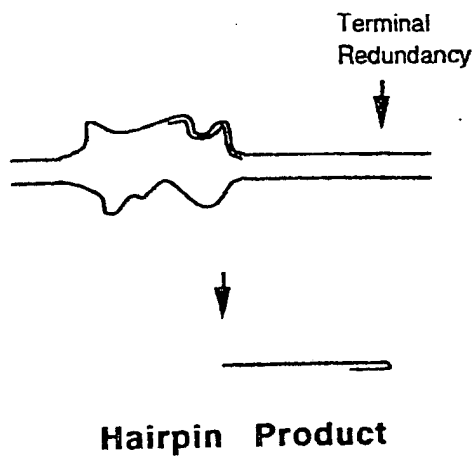


Figure 21

27/29

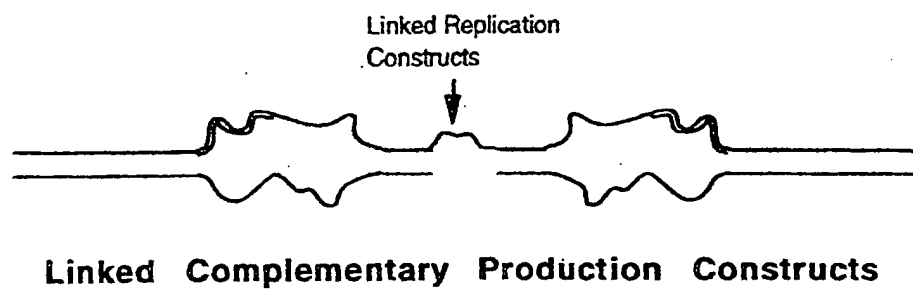
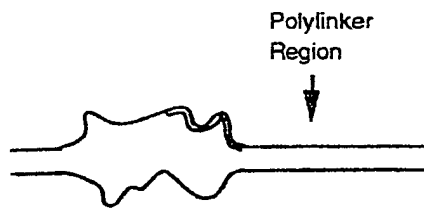


Figure 22

28/29



Cloning Site in Production Constructs

Figure 23

29/29

ARRANGEMENT OF OLIGONUCLEOTIDE PRIMERS IN AMPLIFICATION REACTION

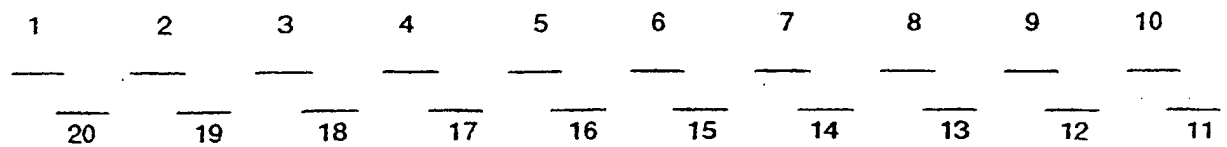


Figure 24